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RTCM

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Before The
FEDERAL COMMUNICATIONS COMMISSION
Washington, D. C. 20554

In the Matter of	)	
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Radio Technical Commission for Maritime Services	)	
	)	
	)	
Petition for rulemaking to amend Part 95 of the Commission's rules to provide for certain personal radio service devices	)	June 14, 2012

PETITION FOR RULEMAKING

The Radio Technical Commission for Maritime Services (RTCM)[1] hereby requests the Commission to commence a rulemaking to revise the regulations at 47 CFR Part 95, Subpart K. This subpart currently contains the regulations for Personal Locator Beacons (PLB). These regulations reference a 2002 edition of an RTCM standard as the basis for

[1] The RTCM is a non-profit organization whose objectives include studying and preparing reports on maritime electronic navigation and telecommunications practices. Our focus is on needs and technologies with a view toward improving efficiency and capabilities of maritime electronic navigation and telecommunications services, suggesting ways to keep rules and regulations to the minimum essential for effectiveness, and making recommendations on important issues. Established as an advisory committee by the U.S. government in 1947 to support technical decision-making in the area of maritime radiocommunications, RTCM is now a membership organization[1] that supports and encourages needed improvements in maritime communications and electronic navigation. RTCM technical standards have been widely incorporated in the FCC Part 80 and 95 rules, they have served as international standards, and they have been used as the basis for many more ITU and IEC international technical standards used in the maritime services.

PLB technical requirements. In July, 2008, RTCM completed and published a revision to this standard, and since then, RTCM completed and published two amendments.[2] Like all RTCM standards, this work was completed by a committee consisting of government and industry representatives.[3] RTCM proposes that 47 CFR 95.1402 be revised to reference the new RTCM standard, as amended, as the basis for authorization of PLBs.

Recently, the mobile satellite industry has introduced portable devices that enable the tracking of persons through their satellite systems. The tracking feature typically allows selected persons to follow the travel and status of a friend or family member using an Internet application. The portable device periodically sends data to a satellite, and this information is used to create the report which is displayed in a Web browser. These are typically subscription services, and may include some type of distress function. In 2008, at the request of the U.S. Coast Guard and U.S. Air Force[4], RTCM began development of a standard for such satellite devices that include a distress function. The Coast Guard and Air Force wanted to make sure that these devices, which provide a function similar to PLBs, would work in emergency situations, and would rapidly and reliably provide sufficient information to mount a successful search and rescue operation. RTCM formed a committee that has representation from equipment manufacturers, the mobile satellite industry, the U.S. Coast Guard, U.S. Air Force, and the Canadian Search and Rescue

[2] RTCM Standard 11010.2 ("RTCM 11010") for 406 MHz Satellite Personal Locator Beacons, with Amendment 1 and Amendment 2, dated June 8, 2012.

[3] RTCM Special Committee 110 on Emergency Beacons

[4] The U.S. Coast Guard is responsible for maritime search and rescue. The U.S. Air Force is the inland search and rescue coordinator.

Secretariat.[5] The committee completed its standard in August 2011.[6] Considering the similarity in function to PLBs, RTCM recommends that a new section of 47 CFR Part 95, Subpart K be inserted covering these systems.

Another type of portable device for locating persons in distress is the Maritime Survivor Locating Device (MSLD), sometimes called a "man-overboard alarm." Since these devices can do more than simply alarm that someone has gone overboard, the latter term is not appropriate to use. The objective of an MSLD is to enable quick rescue of a person in the water by the vessel from which the person came, or nearby vessels. If that can be achieved, the person in the water would not have to wait until search and rescue assets arrive, and the prospect for a successful outcome is greatly improved. This is another device that is supported by the U.S. Coast Guard since it has the potential to eliminate some unnecessary search and rescue cases. Another RTCM committee[7] has had a published MSLD standard for a number of years, but an updated version has just been published.[8] As a maritime device, the MSLD could be covered in 47 CFR Part 80, but we believe it is a personal radio service device, closely related to the PLB and SEND, and might be appropriately covered in the revised 47 CFR Part 95, Subpart K. RTCM does not suggest that all MSLDs need to be governed by the RTCM standard. Our present

[5] RTCM Special Committee 128 on Satellite Emergency Notification Devices

[6] RTCM Standard 12800.0 ("RTCM 12800") for Satellite Emergency Notification Devices (SENDs), dated August 1, 2011.

[7] RTCM Special Committee 119 on Maritime Survivor Locating Devices

[8] RTCM Standard 11901.1 ("RTCM 11901") for Maritime Survivor Locating Devices (MSLDs), dated June 4, 2012.

concern is with those devices that operate on various frequencies in the VHF-FM maritime band, and the 121.5 MHz aeronautical distress frequency, as well as any devices that are designed to notify the Coast Guard or other search and rescue agency directly. At this time, devices which provide an MSLD-like function and use unlicensed spectrum, or other frequencies within the scope of their license are not addressed in our proposal.

RTCM's proposal:

We recommend that 47 CFR Part 95, Subpart K be revised to cover PLBs, SENDs, and MSLDs. Our proposed draft of such a revised Subpart K is at Annex 1. A discussion of the proposal follows:

Title: We suggest that the title of the subpart be changed to "Devices for Location of Persons in Distress" to encompass PLBs, SENDs, and MSLDs.

§ 95.1400(a): This is the text of the present § 95.1400 without the 2003 effective date. Although originally intended to be a description of a PLB, it also perfectly describes SENDs and MSLDs.

§ 95.1400(b): This is the present § 95.1402(d). We believe that it applies to all three devices.

§ 95.1401: We suggest interchanging the present § 95.1401 and § 95.1402(a). Section 95.1402 could then be the location for all of the rules for PLBs. Section 95.1401 could then be used for incorporations by reference for all of Subpart K until and unless an incorporation by reference section is established for all of Part 95.

§ 95.1402: This section remains the location for PLB requirements.

§ 95.1402(a): As explained above, we suggest interchanging the present § 95.1401 and § 95.1402(a).

§ 95.1402(b): All of the present § 95.1402(b) is included in RTCM 11010. Therefore, we suggest simply requiring compliance with RTCM 11010 in this paragraph. In addition, we suggest adding a specific prohibition on the use of "Personal Locator Beacon" or "PLB" for any device which does not meet § 95.1402. A few years ago, the Commission had to direct the manufacturer of a device we now call a SEND, not to call it a PLB.

§ 95.1402(c): (Unchanged except for a specific reference to the RTCM standard)

§ 95.1402(d): We have suggested above moving the present paragraph to § 95.1400(b). The present § 95.1402(e) would move up to (d) with a corrected address for NOAA registration. (There does not seem to be a reason to reserve an empty paragraph (d).)

§ 95.1402(e): This is the present paragraph (f) with a corrected address for NOAA registration, and also with a Web address for registration, which is now the preferred registration method.

§ 95.1402(f): This is the present paragraph (g) otherwise unchanged.

§ 95.1405: This is a new section for SENDs based in part on the PLB proposal.

§ 95.1405(a), (b), (c), and (d): These paragraphs describe what a SEND is and is not.

§ 95.1405(e): This paragraph would require SENDs to meet RTCM 12800, and would reserve the use of SEND terminology to such devices.

§ 95.1405(f): The essential link with government Rescue Coordination Centers is the satellite operator's Emergency Call Center. The Emergency Call Center requirements in

RTCM 12800 have been developed under the guidance of the U.S. Coast Guard and U.S. Air Force.

§ 95.1405(g): Registration of SENDs devices and maintenance of a database are necessary to determine who is sending a request for assistance. In practice, SENDs are subscription systems and such a database will need to exist for that purpose alone, and therefore the database requirement presents a minimal recordkeeping burden on the system operator.

§ 95.1405(h): The requirement for independent testing would parallel that for PLBs in proposed § 95.1402(c).

§ 95.1410: This is a new section for MSLDs based in part on the PLB proposal.

§ 95.1410(a): This paragraph describes what an MSLD is.

§ 95.1410(b) and (c): Our proposal is to limit the applicability of RTCM 11901 at this time to devices that use the aeronautical distress frequency 121.5 MHz, the maritime VHF-FM frequencies used for distress and calling, and Automatic Information Systems (AIS). We include channels 15 and 17, since we expect them to be designated AIS3 and AIS4 in the future. We also include devices that have a function intended to send a distress message directly to the U.S. Coast Guard or any other search and rescue organization in § 95.1410(b)(5), because this should be a last resort measure for these types of devices. This eventuality is addressed in RTCM 11901. We believe it should be possible for manufacturers to offer other types of "man-overboard" devices that operate on unlicensed frequencies, or possibly licensed frequencies other than those we have identified.

§ 95.1410(d): This paragraph would reserve the use of MSLD terminology to devices which are covered by these proposed regulations.

§ 95.1410(e): The requirement for independent testing would parallel that for PLBs in proposed § 95.1402(c).

Conclusion:

RTCM urges the FCC to amend its Part 95 rules as recommended so as to provide an approved means for implementing these valuable services.

For the Radio Technical Commission for Maritime Services

/s/ COPY

R. L. Markle
President

ANNEX 1

Proposed revised 47 CFR Part 95, Subpart K

Subpart K – Devices for Location of Persons in Distress

§ 95.1400 Basis and purpose.

(a) The rules in this subpart are intended to provide individuals in remote areas a means to alert others of an emergency situation and to aid search and rescue personnel locate those in distress.

(b) The procedures of Notification by the equipment manufacturer and Certification from either the Commission or designated Telecommunications Certification Body are contained in subpart J of part 2 of this chapter.

§ 95.1401 Incorporation by reference.

(a) Certain material is incorporated by reference into this subpart with the approval of the Director of the Federal Register under 5 U.S.C. 552(a) and 1 CFR part 51. To enforce any edition other than that specified in this section, the Federal Communications Commission must publish notice of the change in the Federal Register and the material must be available to the public. All approved material is available for inspection at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call (202) 741–6030 or go to http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html. Also it is available for inspection at the Federal Communications Commission, 445 12th Street, SW., Washington, DC (Reference Information Center), and is available from the sources listed below.

(b) The International Electrotechnical Commission (IEC), 3 Rue de Varembe, CH–1211, Geneva 20, Switzerland; www.iec.ch; phone: +41 22 919 02 11; fax: +41 22 919 03 00; email: *info@iec.ch*. (IEC publications can also be purchased from the American National Standards Institute (ANSI) through its NSSN operation (www.nssn.org), at Customer Service, American National Standards Institute, 25 West 43rd Street, New York NY 10036, telephone (212) 642–4900.)

(1) ISO/IEC 17025:2005 ("ISO/IEC 17025"), Edition 2, 2005–05-15, "General requirements for the competence of testing and calibration laboratories," [IBR approved for § 95.1405 and § 95.1410.]

(c) The International Cospas-Sarsat Programme, 700 de la Gauchetière West, Suite 2450, Montreal, Quebec H3B 5M2 Canada

(1) Cospas-Sarsat T.007 ("C/S T.007"), 406 MHz Distress Beacon Type Approval Standard, Issue 4 - Revision 6, October 2011.

(d) The Radio Technical Commission for Maritime Services (RTCM), 1611 N. Kent Street, Suite 605, Arlington, VA 22209; www.rtcm.org; telephone (703) 527–2000; email pubs@rtcm.org.

(1) RTCM Standard 11010.2 ("RTCM 11010") for 406 MHz Satellite Personal Locator Beacons, with Amendments 1 and 2, dated June 8, 2012. [IBR approved for § 95.1402.]

(2) RTCM Standard 11901.1 ("RTCM 11901") for Maritime Survivor Locating Devices (MSLDs), dated June 4, 2012. [IBR approved for § 95.1410.]

(3) RTCM Standard 12800.0 ("RTCM 12800") for Satellite Emergency Notification Devices (SENDs), dated August 1, 2011. [IBR approved for § 95.1405.]

§ 95.1402 Special requirements for 406 MHz Personal Locator Beacons.

(a) The frequency band 406.0-406.1 MHz is an emergency and distress frequency band available for use by Personal Locator Beacons (PLBs). PLBs that transmit on the frequency band 406.0-406.1 MHz must use G1D emission. Use of these frequencies must be limited to transmission of distress and safety communications.

(b) All 406 MHz PLBs must meet all the technical and performance standards contained in RTCM 11010. A transmitting device which does not meet the requirements in this section is prohibited from being identified as a "Personal Locator Beacon" or "PLB".

(c) Before a 406 MHz PLB certification application is submitted to the Commission, the applicant must have obtained certification from a test facility, recognized by one of the COSPAS/SARSAT Partners that the PLB satisfies the standards contained in the COSPAS/SARSAT document COSPAS/SARSAT 406 MHz Distress Beacon Type Approval Standard (C/S T.007). Additionally, an independent test facility must certify that the PLB complies with the electrical and environmental standards associated with RTCM 11010.

(d) An identification code, issued by the National Oceanic and Atmospheric Administration (NOAA), the United States Program Manager for the 406 MHz COSPAS/SARSAT satellite system, must be programmed in each PLB unit to establish a unique identification for each PLB station. With each marketable PLB unit, the manufacturer or grantee must include a postage pre-paid registration card printed with the PLB identification code addressed to: SARSAT Beacon Registration, NSOF, E/SP3, 4231 Suitland Road, Suitland MD 20746. The registration card must request the owner's name, address, telephone number, alternate emergency contact and include the following statement: "WARNING failure to register this PLB with NOAA could result in a monetary forfeiture order being issued to the owner."

(e) To enhance protection of life and property, it is mandatory that each 406 MHz PLB be registered with NOAA and that information be kept up-to-date. In addition to the identification plate or label requirements contained in §§ 2.925 and 2.926 of this chapter, each 406 MHz PLB must be provided on the outside with a clearly discernable permanent plate or label containing the following statement: "The owner of this 406 MHz PLB must register the NOAA identification code contained on this label with the

National Oceanic and Atmospheric Administration (NOAA) at http://www.beaconregistration.noaa.gov/ or by mail at the address: SARSAT Beacon Registration, NSOF, E/SP3, 4231 Suitland Road, Suitland MD 20746." Owners shall advise NOAA in writing upon change of PLB ownership, or any other change in registration information. NOAA will provide registrants with proof of registration and change of registration information.

(f) For 406 MHz PLBs with identification codes that can be changed after manufacture, the identification code shown on the plate or label must be easily replaceable using commonly available tools.

§ 95.1405 Special requirements for Satellite Emergency Notification Devices.

(a) Satellite Emergency Notification Devices (SENDs) are mobile earth stations intended to provide individuals in remote areas a means to alert appropriate private or public emergency response services of an emergency situation, and to aid search and rescue personnel to locate those in distress. SENDs devices operate through satellite systems other than the 406 MHz Cospas-Sarsat system, and which satellite systems are licensed under Part 25 of this Chapter.

(b) SENDs may be small portable devices designed to be carried one person, or they may be mounted in a vehicle. As a minimum, a portable SEND consists of a transmitter module, an integral antenna, and a battery power source, all contained in a single unit. A SEND mounted in a vehicle may have a remote antenna and activation method, and may derive its main source of power from the vehicle, but it must include a backup battery source.

(c) SENDs may include other features or functions in a combined (multifunctional) device, provided those features do not interfere with the performance of the SEND function.

(d) Mobile satellite service devices that offer real-time, two-way switched voice service that is interconnected with the public switched telephone network and terrestrial cellular based devices are not SENDs, and are not regulated under this section, even if they include a dedicated distress function.

(e) Every SEND sold in the United States after [ONE YEAR AFTER THE EFFECTIVE DATE OF THIS RULE] which provides the functions described in this section, must meet all the technical and performance standards contained in RTCM 12800. A transmitting device which does not meet the requirements in this section is prohibited from being identified as a "Satellite Emergency Notification Device" or "SEND".

(f) A SEND provides a means of communicating its location to the emergency response services through an Emergency Call Center as described in RTCM 12800. SEND devices may also include receivers to allow handshaking with the satellite system and in addition, may provide two-way voice or data communication.

(g) To enhance protection of life and property, either the SEND manufacturer, or their designated representative, shall maintain a database of all SEND devices manufactured together with details of the owner of each registered SEND device including their address and emergency contact details. In the

event of an emergency situation the details of the SEND owner shall be made available on a free of charge basis to the emergency response services upon request.

(h) Before a SEND certification application is submitted to the Commission, the applicant must have obtained test report from a test laboratory which shows that the SEND complies with the electrical and environmental standards associated with RTCM 12800. The test laboratory must be accredited to ISO/IEC 17025 with a scope covering the applicable requirements and test procedures.

§ 95.1410 Special requirements for Maritime Survivor Locating Devices.

(a) Maritime Survivor Locating Devices (MSLDs) are devices intended to aid in the location of persons in the water. These may include persons who have accidently fallen overboard, divers who have become separated from their support vessel, or others who are unexpectedly in the water. The objective of an MSLD is to enable quick rescue by the vessel from which the person came, or nearby vessels. Search and rescue forces may be alerted by an MSLD if rescue is not made quickly.

(b) Every MSLD sold in the United States after [ONE YEAR AFTER THE EFFECTIVE DATE OF THIS RULE] which provides the functions described in this section, must meet all the technical and performance standards contained in RTCM 11901 if it –

(1) Transmits on 121.5 MHz,

(2) Transmits on 156.525 MHz (maritime VHF channel 70)

(3) Transmits on 156.750 MHz, 156.800 MHz, or 156.850 MHz (maritime VHF channels 15, 16, 17),

(4) Transmits on 161.975 MHz or 162.025 MHz (maritime VHF Channels AIS 1, AIS2), or

(5) Unless it is a PLB under § 95.1402 of this subpart, includes a function intended to send a distress message directly to the U.S. Coast Guard or any other search and rescue organization.

(c) Devices intended for the purposes in paragraph (a) of this section and not described in paragraph (b) of this section, must meet the regulations in the chapter applicable to their operating frequencies.

(d) A transmitting device which does not meet the requirements in this section is prohibited from being identified as a "Maritime Survivor Locating Device" or "MSLD".

(e) Before an MSLD certification application is submitted to the Commission, the applicant must have obtained test report from a test laboratory which shows that the SEND complies with the electrical and environmental standards associated with RTCM 12800. The test laboratory must be accredited to ISO/IEC 17025 with a scope covering the applicable requirements and test procedures.